

PATENT

INSTITUT FRANÇAIS DU PÉTROLE

MATERIALS COMPRISING ORGANIC PHOSPHOROUS-CONTAINING GROUPS

BONDED TO A MINERAL OXIDE VIA OXYGEN ATOMS

Alain Forestière, P. Hubert Mutin, André Vioux and Gilles Guerrero

ABSTRACT

Essentially amorphous functionalised materials comprise an essentially monomolecular layer of organic phosphorous-containing groups bonded to a mineral oxide of an element M via an oxygen atom of said oxide to a phosphorous atom that is itself preferably bonded to a hydrocarbon chain substituted at a distance from the phosphorous atom by a sulphur-containing group or by a reactive group that can be transformed into a sulphur-containing group, said materials being essentially free of phosphate, phosphonate and phosphinate phases of said element M and the sulphate of said element M when the materials comprise a sulphur-containing group. A process for preparing functionalised materials brings a suspension in a liquid of at least one mineral oxide of at least one element M into contact with a solution in a solvent of at least one phosphorous-containing compound usually comprising, at a distance from the phosphorous atom, a sulphur-containing group connected to said phosphorous atom via a hydrocarbon chain.

09930153-081601